

WHAT IS CLAIMED IS:

1. A method for assessing the financial cost of ownership of a configuration of at least one computer data center defined by a plurality of elements, through the use of systematic, computer assisted procedures, the  
5 method comprising the steps of:
  - a) modeling elements of a data center configuration on a computer by identifying to the computer the elements of a given configuration;
  - b) providing in a knowledge base financial  
10 information which reflects financial ownership costs of the elements associated with a predetermined class of computers, including substantially all of the modelled elements of the given configuration;
  - c) correlating information stored in the knowledge  
15 base with elements of the configuration; and
  - d) outputting at least a portion of the configuration and at least a portion of the associated information to a user.
2. The method of claim 1, including performing the modeling step and the correlating step by means of a substantially automatic software controlled process and said correlating step including calculating the financial  
5 ownership costs over selected time periods.
3. The method of claim 2, in which the configuration includes information defining at least one data center location, at least one system within the location, at least one device group within the system,  
5 and at least one device within the device group.

4. The method of claim 2, further including  
altering at least one of a plurality of hardware elements  
of configuration and substantially automatically  
recorrelating the altered configuration with information  
5 stored in the knowledge base and generating a revised  
output reflecting the changes to the configuration.

5 5. The method of claim 2, wherein the modeling  
step includes modeling software products associated with  
at least some of hardware elements and the knowledge base  
includes financial information reflecting the ownership  
costs of the software products and the outputting step  
includes displaying of financial information reflecting  
the cost of using the software products in conjunction  
with a selected hardware configuration.

5 6. The method of claim 2, including storing in the  
knowledge base, for at least a plurality of software  
products, financial information which reflects ownership  
costs of the software products related to hardware  
elements with which the software products are used.

5 7. The method of claim 2, including the step of  
providing in the knowledge base pre-stored lists of  
hardware elements and enabling a user to select hardware  
elements for inclusion in the modeling of said data  
center configuration.

5 8. The method of claim 2, including the step of  
providing in the knowledge base pre-stored lists of  
software products and enabling the user to select  
software products for inclusion in the modeling of said  
data center configuration.

9. The method of claim 2, including calculating the present value of the financial ownership costs modeled over selected time periods.

10. The method of claim 2, wherein said financial ownership costs includes the costs of electrical usage by hardware elements of said at least one computer data center.

11. The method of claim 2, wherein said financial ownership costs includes space costs used by hardware components of said at least one computer data center.

12. The method of claim 6, including calculating ownership costs of the software products based on CPU model groups on which the software products are intended to be used.

13. The method of claim 6, including calculating ownership costs of the software products based on MIPS ratings of CPU hardware elements with which the software products are intended to be used.

14. The method of claim 3, including preparing a respective configuration for a plurality of devices within the location and including moving at least one device from one data center configuration to another.

15. The method of claim 3, including enabling the disposition of the device in a manner such that historical records of the device remain stored in the system.

16. The method of claim 3, including enabling calculating the replacement of at least one device within the device group with one or more other devices to show financial and technical ramifications of such replacement without losing original information stored for a given configuration prior to the replacement step.

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17. An apparatus for managing at least one of hardware and software elements of at least one computer data center, said apparatus comprising:

a knowledge base that stores information concerning a plurality of the elements;

5 a configuration storage that stores at least one configuration that defines at least one location, at least one system within the location, at least one device group within the system, and at least one device within the device group;

10 a correlator that correlates information stored in said knowledge base that is associated with essentially each element of said configuration and stores said associated information in said configuration storage; and

15 a display generator that generates a display comprising at least a portion of said configuration and at least a portion of said associated information.

18. The apparatus of claim 17, wherein said associated information stored in said configuration storage includes financial information concerning at

5       least one of the location, system, device group and  
device of said configuration.

19. The apparatus of claim 17, wherein said  
associated information stored in said configuration  
storage includes technical information concerning at  
least one of the location, system, device group and  
5       device of said configuration.

20. The apparatus of claim 17, wherein said  
associated information stored in said configuration  
storage includes a summary of financial and technical  
information of at least one of said location, system,  
5       device group and device of said configuration.

21. The apparatus of claim 17, wherein said  
associated information stored in said configuration  
storage includes software product information associated  
with the device of said configuration.

22. The apparatus of claim 17, wherein said  
associated information stored in said configuration  
storage includes history information of the device of  
said configuration.

23. The apparatus of claim 17, further comprising a  
table generator which generates table information of at  
least a portion of said associated information for  
selected ones of said location, system, device group and  
5       device of said configuration over a selected time  
interval; said table information being delivered to said  
display generator.

24. The apparatus of claim 23, further comprising a chart generator that generates a chart representing the table information for delivery to said display generator.

25. The apparatus of claim 17, further comprising a report generator that generates a report of at least a portion of said configuration and of said associated information over a selected time interval.

26. The apparatus of claim 17, further comprising an editor for editing said configuration and said associated information stored in said configuration storage and for editing the information stored in said knowledge base.

27. A method of managing at least one of hardware and software elements of at least one data center, said method comprising the steps of:

5 storing information concerning a plurality of the elements:

storing at least one configuration that includes at least one location, at least one system within the location, at least one device group within the system, and at least one device within the device group;

10 correlating information that is associated with essentially each element of said configuration and storing said associated information; and

generating a display comprising at least a portion of  
said configuration and at least a portion of said  
15 associated information.

28. The method of claim 27, wherein said associated  
information includes financial information concerning at  
least one of the location, system, device group and  
device of said configuration.

29. The method of claim 27, wherein said associated  
information includes technical information concerning at  
least one of the location, system, device group and  
device of said configuration.

30. The method of claim 27, wherein said associated  
information includes a summary of financial and technical  
information of at least one of said location, system,  
device group and device of said configuration.

31. The method of claim 27, wherein said associated  
information includes software product information  
associated with the device of said configuration.

32. The method of claim 27, wherein said associated  
information includes history information of the device of  
said configuration.

33. The method of claim 27, further comprising the  
step of generating table information of at least a  
portion of said associated information of selected ones  
of said location, system, device group and device of said  
configuration over a selected time interval.  
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34. The method of claim 33, comprising the step of generating a chart representing the table information.

35. The method of claim 27, further comprising the step of generating a report of at least a portion of said configuration and said associated information over a selected time interval.

36. The method of claim 27, further comprising the step of editing said configuration and said associated information and editing the information concerning said device.

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37. The method of claim 27, including adding a new location to the configuration, said adding step comprising the steps of: selecting a new location transaction; and entering a name of a new location within said configuration.

38. The apparatus of claim 17, wherein said display generator includes a facility that enters a name of a new location within said configuration.

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39. The method of claim 27, including adding a new system to the configuration, said adding step comprising the steps of: selecting a location within said configuration; and entering a name of a new system within said location.

40. The apparatus of claim 17, wherein said display generator further includes means for selecting a location within said configuration, and means for entering a name of a new system within said location.

41. The method of claim 27, further comprising means for selecting a location within said configuration; and means for entering a name of a new system within said location.

42. The method of claim 27, including adding a new device to the configuration, said adding step comprising the steps of:

- 5       selecting a desired device type;  
selecting the system within said configuration wherein  
said desired device type is to be added;  
adding said desired device type to said system;  
assigning a device model to said device type; and  
assigning further associated information to the device  
10      model.

43. The method of claim 42, wherein said further associated information includes at least one of financial information, technical information, and custom information.

- 5        44. The apparatus of claim 17, wherein said display generator includes means for selecting a new device type; means for selecting the system within said configuration where said new device type is to be added; means for adding said new device type to said system; and means for assigning further associated information to said device model.

45. The apparatus of claim 44, wherein said further associated information includes at least one of financial information, technical information, and custom information.

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46. The apparatus of claim 17, further including means for selecting a new device type; means for selecting the system within said configuration where said new device type is to be added; means for adding said new device type to said system; and means for assigning further associated information to said device model.

47. The apparatus of claim 46, wherein said further associated information includes at least one of financial information, technical information, and custom information.

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48. The method of claim 27, including updating information in the configuration of at least one data center, comprising the steps of:  
selecting the device of said configuration that is to be updated;  
selecting a portion of the associated information corresponding to the selected device; and  
updating the portion of the associated information.

49. The method of claim 48, wherein the associated information includes at least one of financial information, technical information, and custom information.

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50. The apparatus of claim 17, wherein said display generator further comprises: means for selecting the device of said configuration that is to be updated; means for selecting a portion of the associated information corresponding to the selected device; and means for updating the portion of the associated information.

51. The apparatus of claim 50, wherein the associated information includes at least one of financial information, technical information, and custom information.

52. The method of claim 27, including the step moving a device within the configuration of at least one data center, said step comprising the steps of:  
selecting the device within the system of said configuration that is to be moved;  
selecting another system to which said selected device is to be moved; and  
selecting a date that said selected device is to be moved.

53. The method of claim 52, wherein said display generator includes means for selecting the device of said configuration that is to be moved; means for selecting a new system to which said selected device is to be moved; and means for selecting a date on which the selected device is to be moved.

54. The method of claim 27 including the step of disposing of a device within a configuration of at least one data center; said configuration including at least one location, at least one system within the location, at least one device group within the system and at least one device within the device group; wherein associated information is correlated with each element of said configuration, said disposing step comprising the steps of:  
10 selecting the device within said configuration that is to be disposed; and selecting a disposal date.

55. The apparatus of claim 17, wherein said display generator includes means for selecting a device that is to be disposed from said configuration; and means for selecting a disposal date.

56. The method of claim 27, including modeling proposed changes, said modelling step comprising the steps of:

selecting an existing configuration;  
5 performing at least one modification to said existing configuration; and  
selecting a modification date for said modification.

57. The method of claim 56, wherein said at least one modification includes adding at least one device to said selected configuration.

58. The method of claim 56, wherein said at least one modification includes moving at least one device within said selected configuration.

59. The method of claim 46, wherein said at least one modification includes disposing of at least one device within said selected configuration.

60. The method of claim 56, further comprising the steps of generating another proposed configuration, and generating at least one of a table and a chart for comparing the proposed configuration and the another proposed configuration.  
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